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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,318	07/30/2003	Malcolm M. Smith	062891.1132	9090

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EXAMINER	
NGUYEN, KHAI MINH	
ART UNIT	**PAPER NUMBER**
2617	

NOTIFICATION DATE	DELIVERY MODE
05/04/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/630,318	SMITH ET AL.	
	Examiner	Art Unit	
	Khai M. Nguyen	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's argument with respect to claim 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jonsson et al. (U.S.Pub-20020146000) in view of Scarmalis (U.S.Pat-6134245).

Regarding claim 1, Jonsson teaches an apparatus for compressing data (abstract), comprising:

a cell site element associated with a base transceiver station and operable to receive a packet communicated by a mobile station (paragraph 0026, 0029, and 0033), and to extract a high-level data link control (HDLC) payload from the packet (fig.5-6, paragraph 0057-0060), and a UDP destination port field of a UDP packet (fig.5-6, paragraph 0057-0060), the UDP packet being sent to a routing functionality of the cell site element such that it may be directed to a next destination (fig.5-6, paragraph 0057-0060).

Jonsson fails to specifically disclose wherein the cell site element is further operable to perform a compression process on the HDLC payload in order to reduce a

number of bytes associated with the packet, the cell site element being further operable to build a key that maps the HDLC payload associated with the packet to the key, the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field, a user datagram protocol (UDP) source port field. However, Scarmalis teaches wherein the cell site element is further operable to perform a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet (fig.4-8, col.3, line 49 to col.4, line 27), the cell site element being further operable to build a key that maps the HDLC payload associated with the packet to the key (fig.4-8, col.7, lines 9-37), the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field (fig.4-8, col.7, lines 9-37), a user datagram protocol (UDP) source port field (fig.4-8, col.7, lines 9-37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Scarmalis to Jonsson to provide an improvement to a frame communication environment by enabling the compression and transport of non frame data over a standard network.

Regarding claim 2, Scarmalis and Jonsson further teach the apparatus of claim 1, wherein the cell site element is operable to construct the UDP packet (see Jonsson, fig.5-6, paragraph 0057-0060), and wherein remaining fields of the HDLC payload may be copied and positioned into a payload field of the UDP packet (see Jonsson, fig.5-6, paragraph 0057-0060, see Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27).

Regarding claim 3, Scarmalis and Jonsson further teach the apparatus of claim 1, further comprising:

an aggregation node associated with a base station controller and operable to receive a point to point protocol (PPP) over HDLC packet that corresponds to the UDP packet from the cell site element (see Jonsson, fig.5-6, paragraph 0057-0060, see Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27).

Regarding claim 4, Scarmalis and Jonsson further teach the apparatus of claim 1, wherein the routing functionality receives the UDP packet (see Jonsson, fig.5-6, paragraph 0057-0060) and selects an outgoing interface to direct the packet (see Jonsson, fig.5-6, paragraph 0057-0060), the outgoing interface operable to add a layer-two encapsulation (see Jonsson, fig.5-6, paragraph 0057-0060) and to perform a layer-two compression operation on the UDP packet (Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27).

Regarding claim 5, Scarmalis and Jonsson further teach the apparatus of claim 4, wherein the routing functionality implements a compressed UDP (cUDP) and a PPP multiplex protocol in order to compress the UDP packet (Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27).

Regarding claim 6, Scarmalis and Jonsson further teach the apparatus of claim 5, wherein the UDP packet may be demultiplexed into one or more individual cUDP packets (Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27).

Regarding claim 7, Scarmalis and Jonsson further teach the apparatus of claim 6, further comprising:

a cUDP compressor operable to utilize one or more context IDs in order to resolve them into a UDP/IP header such that an original source IP field and original UDP source (Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27) and destination fields may be restored for a reconstructed HDLC packet (Scarmalis, fig.4-8, col.3, line 49 to col.4, line 27).

Regarding claim 8, Jonsson teaches a method for compressing data (abstract), comprising:

receiving a packet communicated by a mobile station (paragraph 0026, 0029, and 0033);

extracting a high-level data link control (HDLC) payload from the packet (fig.5-6, paragraph 0057-0060); and

a UDP destination port field of a UDP packet (fig.5-6, paragraph 0057-0060); and communicating the UDP packet to a routing functionality such that it may be directed to a next destination (fig.5-6, paragraph 0057-0060).

Jonsson fails to specifically disclose performing a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet; building a key that maps the HDLC payload associated with the packet to the key, the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field, a user datagram protocol (UDP) source port field. However, Scarmalis teaches performing a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet (fig.4-8, col.3, line 49 to col.4, line 27); building a key that maps the HDLC payload associated with the packet to

the key (fig.4-8, col.7, lines 9-37), the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field (fig.4-8, col.7, lines 9-37), a user datagram protocol (UDP) source port field (fig.4-8, col.7, lines 9-37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Scarmalis to Jonsson to provide an improvement to a frame communication environment by enabling the compression and transport of non frame data over a standard network.

Regarding claim 9 is rejected with the same reasons set forth in claim 2.

Regarding claim 10 is rejected with the same reasons set forth in claim 3.

Regarding claim 11 is rejected with the same reasons set forth in claim 4.

Regarding claim 12 is rejected with the same reasons set forth in claim 5.

Regarding claim 13 is rejected with the same reasons set forth in claim 6.

Regarding claim 14 is rejected with the same reasons set forth in claim 7.

Regarding claim 15, Jonsson teaches a system for compressing data (abstract), comprising:

means for receiving a packet communicated by a mobile station (paragraph 0026, 0029, and 0033);

means for extracting a high-level data link control (HDLC) payload from the packet (col.5, line 40 to col.6, line 14); and

a UDP destination port field of a UDP packet (fig.5-6, paragraph 0057-0060); and

means for communicating the UDP packet to a routing functionality such that it may be directed to a next destination (fig.5-6, paragraph 0057-0060).

Jonsson fails to specifically disclose means for performing a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet; means for building a key that maps the HDLC payload associated with the packet to the key, the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field, a user datagram protocol (UDP) source port field. However, Scarmalis teaches means for performing a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet (fig.4-8, col.3, line 49 to col.4, line 27); means for building a key that maps the HDLC payload associated with the packet to the key (fig.4-8, col.7, lines 9-37), the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field (fig.4-8, col.7, lines 9-37), a user datagram protocol (UDP) source port field (fig.4-8, col.7, lines 9-37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the teaching of Scarmalis to Jonsson to provide an improvement to a frame communication environment by enabling the compression and transport of non frame data over a standard network.

Regarding claim 16 is rejected with the same reasons set forth in claim 2.

Regarding claim 17 is rejected with the same reasons set forth in claim 3.

Regarding claim 18 is rejected with the same reasons set forth in claim 4.

Regarding claim 19 is rejected with the same reasons set forth in claim 5.

Regarding claim 20 is rejected with the same reasons set forth in claim 6.

Regarding claim 21 is rejected with the same reasons set forth in claim 7.

Regarding claim 22, Jonsson teaches software for compressing data (abstract), the software being embodied in a computer readable medium and comprising code such that when executed is operable to:

receive a packet communicated by a mobile station (paragraph 0026, 0029, and 0033);

extract a high-level data link control (HDLC) payload from the packet (col.5, line 40 to col.6, line 14); and

a UDP destination port field of a UDP packet (fig.5-6, paragraph 0057-0060); and

communicate the UDP packet to a routing functionality such that it may be directed to a next destination (fig.5-6, paragraph 0057-0060).

Jonsson fails to specifically disclose perform a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet; build a key that maps the HDLC payload associated with the packet to the key, the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field, a user datagram protocol (UDP) source port field. However, Scarmalis teaches means for performing a compression process on the HDLC payload in order to reduce a number of bytes associated with the packet (fig.4-8, col.3, line 49 to col.4, line 27); means for building a key that maps the HDLC payload associated with the packet to the key (fig.4-8, col.7, lines 9-37), the key being broken into segments that are positioned into a selected one or more of a source internet protocol (IP) address field (fig.4-8, col.7, lines 9-37), a user datagram protocol (UDP) source port field (fig.4-8, col.7, lines 9-37). Therefore, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to apply the teaching of Scarmalis to Jonsson to provide an improvement to a frame communication environment by enabling the compression and transport of non frame data over a standard network.

Regarding claim 23 is rejected with the same reasons set forth in claim 2.

Regarding claim 24 is rejected with the same reasons set forth in claim 3.

Regarding claim 25 is rejected with the same reasons set forth in claim 4.

Regarding claim 26 is rejected with the same reasons set forth in claim 5.

Regarding claim 27 is rejected with the same reasons set forth in claim 6.

Regarding claim 28 is rejected with the same reasons set forth in claim 7.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571.272.7923. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph feild can be reached on 571.272.4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Khai Nguyen
Au: 2617

4/19/2007

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SUPERVISORY PATENT EXAMINER